

HZ-1

HZ-1 is designed to cover a wide range of Hydrogen, Hydrocarbon and Natural Gas applications, lubricated and non-lubricated. Its unique combination of specifically chosen fillers enhance wear properties to give low and reliable wear rates and therefore outperform other commodity grades. The reinforced PTFE based material offers good creep resistance and high conformity to the rod and cylinder. It can also be used with aluminium piston.

Physical Properties

Property	Method	Value
COTE - Radial x 10 ⁻⁶ /C (20-200 °C)	ASTM D696	79.9
COTE - Axial x 10 ⁻⁶ /C (20-200 °C)	ASTM D696	141.0
Density (g/cm ³)	ASTM D792	2.10
Shore D Hardness	ASTM D2240	63.1
Tensile strength at break (MPa)	ASTM D638	19.2
Elongation at break (%)	ASTM D638	82.6

Air

Industrial Gases

Natural Gas

Refinery

Olefins

Alcohols

Chemicals

Refrigeration

Operating range

Max. Gas Temperature (°C)		Max. Pressure (bar)			
Discharge	Design	Packing Discharge		Cylinder Ring Diff.	
		Non-Lube	Lube	Non-Lube	Lube
180	120	40	100	25	60

Operating restriction for oxygen-service: Compression ratio up to 3

All values are approximate and subject to change without notification.

The maximum material design temperature is calculated by considering suction and discharge conditions, machine speed, cooling and loading. Typically: $T_{design} = T_{suction} + 2/3(T_{discharge} - T_{suction})$. Additional operating conditions need to be considered when making material selections. The data presented are guidelines only; consult HOERBIGER to ensure the correct material is specified.

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